**DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

# WELDING INSPECTION REPORT

**Resident Engineer:** Casey, William
**Address:** 333 Burma Road
**City:** Oakland, CA 94607

**Report No:** WIR-026792
**Date Inspected:** 29-Nov-2011

**Project Name:** SAS Superstructure
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV
**Contractor:** Watson Bowman ACME

**OSM Arrival Time:** 800
**OSM Departure Time:** 1630
**Location:** Buffalo, NY

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|---|---|---|---|---|---|---|---|
| **CWI Name:** | Reno Davis, John Crabtree | | | **CWI Present:** | ☑ Yes | ☐ No | |
| **Inspected CWI report:** | ☐ Yes | ☐ No | ☑ N/A | **Rod Oven in Use:** | ☑ Yes | ☐ No | ☐ N/A |
| **Electrode to specification:** | ☑ Yes | ☐ No | ☐ N/A | **Weld Procedures Followed:** | ☑ Yes | ☐ No | ☐ N/A |
| **Qualified Welders:** | ☑ Yes | ☐ No | ☐ N/A | **Verified Joint Fit-up:** | ☑ Yes | ☐ No | ☐ N/A |
| **Approved Drawings:** | ☑ Yes | ☐ No | ☐ N/A | **Approved WPS:** | ☑ Yes | ☐ No | ☐ N/A |
| | | | | **Delayed / Cancelled:** | ☐ Yes | ☑ No | ☐ N/A |

**Bridge No:** 34-0006
**Component:** Hinge A

**Summary of Items Observed:**

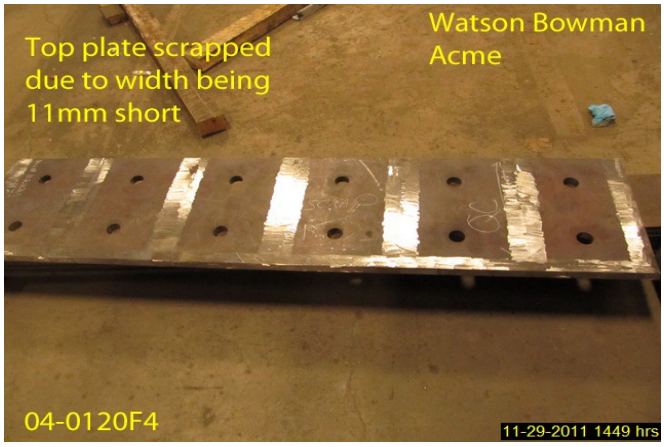
On this date, Quality Assurance Inspector (QAI) Kenneth Riley was present at the Watson Bowman Acme Corporation (WBA) facility, as requested, in Buffalo, New York to observe fabrication activities of the Seismic Expansion Joint Hinge A lanes for the San Francisco Oakland Bay Bridge (SFOBB) project.

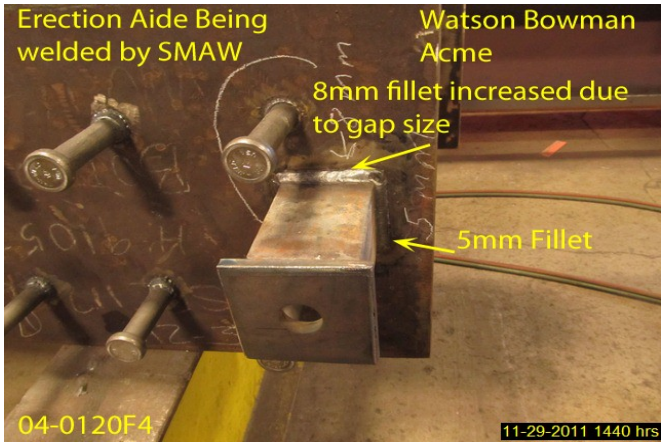
This (QAI) Inspector met with Watson Bowman Acme Corporation (WBA) Quality Control (QCS) Supervisor John Miller and KTA-Tator (ABF Representative), Certified Welding Inspectors (CWI), Reno Davis Day Shift, and Mr. John Crabtree night shift. ABF Representatives are the Quality Control personnel for this location.

This QAI arrived at WBA and observed Jayson Gray and Joe Kearns were performing Flux Core Arc Welding (FCAW) welding and on components SEI112667-CA2-14 and 15, using Hobart (Tri-Mark) TM-811N1 electrode under WPS's FCAW-NY-16 (CJP for Joint TC-U5a-GF),and FCAW-13 (CJP for joint TC-U4b-GF). Both welders were observed using a rose bud torch to pre-heat the areas to 107 degrees Celsius (225F). The Complete Joint Penetration (CJP) welds being welded on the channel boxes joins the top, bottom and back plates to the end plates are designated as 7D, 7E and 7F. The welders were observed as placing the intermediate weld passes at these locations. Also noted was welder John Ash working on the lifting lugs and erection aides on the previously welded channel were these items were removed due to the single pass fillet weld by FCAW process. Mr. Ash was observed as using the SMAW process with E7018 electrode for these locations. The erection aides' were designed to have a single pass 5mm fillet weld all around at the angle to plate connection. Due to matching the slope of the boxes one leg of the fillet was increased to +/- 8mm multi-pass due to the gap matching. WBA increased according to the contract documents (AWS D1.5 sec 3.3.1). QC personnel Reno Davis was observed onsite and monitoring the welding of these joints. Mr. Davis was also noted as checking the welding parameters for

compliance to the Welding Procedure Specification (WPS). Mr. John Crabtree QC for the night shift is also performing observations and monitoring of the welding for ABF on the night shift. WBA has James DiVirgillio performing the SMAW welding of the new lifting lugs and erection aides and welder Nikolas Mattoon was welding on channel CA2-15.

During a random observation with QC Reno Davis it was noted that one (1) top plate was scrapped by WBA due to wrong dimensions. The width of the top plate was 11mm to short as detailed on the Shop drawings.




**Summary of Conversations:**

Conversation between the QAI and WBA's QCM Greg Ross;

This QAI asked Mr. Ross about the support plates located at eagle Fabrication in Buffalo where they were to be flattened and the 19mm taper applied. In the afternoon on this date Mr. Ross stated that he was trying to rush out to get to Eagle for the purpose of taking the measurements before flattening and after flattening as agreed by Mr. Ross to Senior Structural Materials Representative Mazen Wahbeh and Resident Engineer Bill Casey. Mr. Ross did inform this QAI that the flattening and tapering process had been completed on 16 plates (2-SP1, 2-SP2 and 12-SP3). This QAI informed Mr. Ross that WBA was to have a QC person at this location for this process. It was also conveyed that the purpose for these measurements was to document the measurements in the RFI for additional processing and payment showing the condition of the plates. Mr. Ross stated that he has informed Eagle Fabrication to stop any further flattening of the remaining 12 SP3 plates until he can be onsite. This QAI also spoke with Eagle Fabrication and it was relayed that Mr. Ross told them that he wanted to be onsite when they started but was unaware of the measurement's that needed to be taken and documented. Eagle stated they started the flattening process on Friday 11-25-11 and finished the 16 plates on 11-29-11 due to being informed that WBA needed these plates As Soon As Possible.

This QAI spoke with the SMR Bahjat Dagher about this issue and that WBA needed these plates at their facility to continue the fabrication process (Stud welding and flat bar welding) it was agreed that this QAI would green tag these plates with a blue dot (on 11-30-11) due to process not being completed but is fit for purpose.

**Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

# WELDING INSPECTION REPORT

*( Continued Page 3 of 3 )*

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| **Inspected By:** | Riley,Ken | Quality Assurance Inspector |
| **Reviewed By:** | Levell,Bill | QA Reviewer |